



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,251	04/14/2004	Ian R. Ollmann	APL1P301/P3248	8088
63/464 7590 03/18/2010 BEYER LAW GROUP LLP/APPLE INC. P.O. BOX 1687 CUPERTINO, CA 95015-1687				
EXAMINER				
TAN, ALVIN H				
ART UNIT		PAPER NUMBER		
2173				
NOTIFICATION DATE		DELIVERY MODE		
03/18/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOmail@beyerlaw.com

Office Action Summary

Application No.

10/825,251

Applicant(s)

OLLMANN ET AL.

Examiner

ALVIN H. TAN

Art Unit

2173

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-6, 8, 11-15, 23-34 and 38-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-6, 8, 11-15, 23-34 and 38-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Remarks

1. Claims 4-6, 8, 11-15, 23-34, and 38-48 have been examined and rejected. This Office action is responsive to the amendment filed on 11/30/09, which has been entered in the above identified application.

Claim Objections

2. Claim 1 has been canceled and thus, the objections to the claim are withdrawn.

Specification

3. Examiner notes that Applicant incorrectly references a paragraph in the amendments to the specification. On *[page 3, line 3]* of Applicant's amendments, Applicant mistakenly references "the paragraph on page 7 (continues on page 8), beginning at line 20". Examiner notes that the paragraph Applicant is amending (paragraph in the specification beginning with "File data indicating relative importance of rows...") starts on *[page 11, line 20]* and ends on *[page 12, line 2]*.
4. The amendment filed 11/30/09 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

- a. The original disclosure does not have support for the amendments to the paragraph starting on *[page 11, line 20]* of the specification and ending on *[page 12, line 2]*. The three lines Applicant has added to the end of that paragraph recite, "It should be noted that the appearance of the scroll bar depicted in FIG. 8C can change dynamically during scrolling when, for example, rows corresponding to granule objects 9-18 (not shown) are displayed." There is no support in the original disclosure for this amendment. The term "scroll bar" is recited throughout the original disclosure and one of ordinary skill in the art at the time the invention was made would interpret "scroll bar" to mean the entire bar that appears on the side or bottom of a window that allows the user to control which part of the document is currently in the window frame. Applicant's amendments appear to equate the "scroll bar" with the scroll box (also called a scroll thumb or elevator) that moves from one end to the other within the scroll bar to reflect the position within a document. The original disclosure does not provide support for this interpretation. There is also no support in the original disclosure for changing the entire scroll bar based on a current position of the file being scrolled.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

5. Claim 1 has been canceled and thus, the rejection to claims 1, 4-34, and 38 under 35 U.S.C. 112, first and second paragraph, are withdrawn.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 4-6, 8, 11-15, 23-34, 38-44, and 46-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Independent claim 39 recites, "changing the appearance of the scroll bar as the scroll bar is moved relative to the file, wherein the change in appearance of the scroll bar is based upon the determined relative importance of the desired locations in the file corresponding to a current position of the scroll bar" [*lines 13-16 of claim 39*]. Similar language is found in independent claims 40 and 44. Nowhere in the original specification discloses this limitation.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-6, 8, 11-15, 23, 26, 38-42, 44, 46, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (U.S. Patent No. 7,228,492 B1), herein after Graham '492, in view of Nielsen (U.S. Patent No. 6,339,437 B1).

Claims 4-6, 8, 11-15, 23, 26, 38, 39 (Method)

Claim 40-42 (Computer Readable Storage Medium)

Claim 44, 46, 47 (System)

9-1. Regarding claims 39, 40, and 44, Graham '492 teaches the claim comprising obtaining one or more location criteria to identify a plurality of desired locations in the file, by disclosing accepting user input indicating a user's specified concepts of interest [*Graham '492, column 2, lines 8-10*].

Graham '492 teaches identifying one or more scroll bar display criteria for changing the appearance of the scroll bar to designate the plurality of desired locations in a file, wherein the change of appearance of the scroll bar is based upon a relative importance of the desired locations with respect to each other, by disclosing displaying a graphical representation of the presence of one or more concepts of interest to the user [*Graham '492, column 2, lines 25-27*]. Annotations may also be added to the document text to denote relevance to user-selected concepts of interest [*Graham '492, column 7, lines 21-23*].

Graham '492 teaches locating the plurality of desired locations in the file according to the one or more location criteria, by disclosing analyzing an electronically stored document to identify locations of discussion of the user-specified concept of interest [*Graham '492, column 2, lines 10-13*].

Graham '492 teaches determining relative importance of each one of the plurality of desired locations in the file with respect to each other, by disclosing that techniques for determining locations of concepts of interest can be used such as keyword counting and Bayesian analysis [*Graham '492, column 2, lines 13-19*].

Graham '492 does not expressly teach changing the appearance of the scroll bar as the scroll bar is moved relative to the file, wherein the change in appearance of the scroll bar is based upon the determined relative importance of the desired locations in the file corresponding to a current position of the scroll bar. Nielsen discloses changing a display of information to reflect the amount of relevant content which would be visible in a display window at a current location of a scrolling thumb on a scroll bar [*Nielsen, column 1, lines 33-38*]. Relevance is determined by locating relevance markers within text of a document based on a query [*Nielsen, column 4, line 52 to column 5, line 7*]. The amount of relevance at a given scroll thumb location is reflected by changing the appearance of the scroll thumb itself or the entire scroll bar [*Nielsen, column 6, lines 49-55*]. This allows the user to more easily determine where in the file relevant content is located [*Nielsen, column 1, lines 25-30*]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the method of determining relevance of user-selected concepts of interest, as taught by Graham '492, with the

method of changing the appearance of the scroll thumb or scroll bar using a graphical representation based on the relevance at a desired location of the file corresponding to a current position of the scroll bar, as taught by Nielsen. This would allow the user to more easily determine where in the file relevant content is located.

9-2. Regarding claim 4, Graham '492 and Nielsen teach the claim with respect to claim 39, wherein each of a plurality of horizontal segments of the scroll bar are displayed with at least one of a color, hue, intensity, and transparency indicating its relative importance, because the annotation contour of Graham must have some sort of color. Additionally, Nielsen discloses using color to indicate relative importance [*Nielsen, column 6, lines 24-32*].

9-3. Regarding claim 5 and 6, Graham '492 and Nielsen teach the claim with respect to claim 39, wherein displaying the scroll bar further comprises applying a background display criteria to a plurality of locations of the scroll bar corresponding to remaining locations in the file that do not include the desire locations and displaying one or more of the plurality of locations in the file by applying the display criteria and the background display criteria, by disclosing displaying the annotation contour corresponding to concepts of interest in a document [*Graham '492, column 4, lines 14-18*]. Thus, parts of the document where there are no concepts of interest will not have a contour and just have a background color.

9-4. Regarding claim 8, Graham '492 and Nielsen teach the claim with respect to claim 39, further comprising displaying one or more of the plurality of locations in the file by applying the display criteria, by disclosing that the annotation contour represents locations with the document [*Graham '492, column 4, lines 32-43*].

9-5. Regarding claim 11, Graham '492 and Nielsen teach the claim with respect to claim 39, wherein the location criteria is used to identify one or more errors, by disclosing receiving user input indicating user-specified concepts of interest [*Graham '492, column 7, lines 33-34*]. Thus, the user may submit any term or phrase such as "error".

9-6. Regarding claim 12, Graham '492 and Nielsen teach the claim with respect to claim 39, wherein the location criteria is used to identify one or more warnings, by disclosing receiving user input indicating user-specified concepts of interest [*Graham '492, column 7, lines 33-34*]. Thus, the user may submit any term or phrase such as "warning".

9-7. Regarding claim 13, Graham '492 and Nielsen teach the claim with respect to claim 39, further comprising obtaining one or more user-defined location criteria, by disclosing receiving user input indicating user-specified concepts of interest [*Graham '492, column 7, lines 33-34*].

9-8. Regarding claims 14, 41, and 46, Graham '492 and Nielsen teach the claim with respect to claims 13, 40, and 44 respectively, further comprising obtaining one or more user-defined display criteria, by disclosing a sensitivity control that allows the user to select the degree of sensitivity to apply in identifying potential locations of relevant discussion [*Graham '492, column 6, lines 50-64*].

9-9. Regarding claims 15, 42, and 47, Graham '492 and Nielsen teach the claim with respect to claims 39, 40, and 44 respectively, wherein the location criteria includes one or more rankings associated with one or more content-dependent criteria, by disclosing [*Graham '492, figure 5*].

9-10. Regarding claim 23, Graham '492 and Nielsen teach the claim with respect to claim 39, wherein each of the one or more display criteria is associated with one or more of the location criteria, by disclosing that the annotation contour represents locations with the document [*Graham '492, column 4, lines 32-43*].

9-11. Regarding claim 26, Graham '492 and Nielsen teach the claim with respect to claim 5, wherein the background display criteria includes at least one of color, hue, intensity, and transparency, by disclosing [*Graham '492, figure 1A*].

9-12. Regarding claim 38, Graham '492 and Nielsen teach the claim with respect to claim 39, further comprising receiving a selection of a location of the scroll bar after the

scroll bar is displayed, by disclosing that a sliding window may be repositioned along the annotation contour [*Graham '492, column 7, lines 12-16*].

9-13. Regarding claims 43 and 48, Graham '492 and Nielsen teach the claim with respect to claims 40 and 44 respectively, wherein each of the one or more display criteria includes at least one of color, hue, intensity, and transparency, because the annotation contour of Graham must have some sort of color. Additionally, Nielsen discloses using color to indicate relative importance [*Nielsen, column 6, lines 24-32*].

10. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (U.S. Patent No. 7,228,492 B1), in view of Nielsen (U.S. Patent No. 6,339,437 B1), and further in view of Eick (U.S. Patent No. 5,644,692).

Claims 24, 25

10-1. Regarding claim 24, Graham '492 and Nielsen teach the claim as recited in claim 5. Graham '492 and Nielsen do not expressly teach the claim further comprising obtaining user-defined background display criteria. Eick discloses a scroll bar with markers indicating specific details of a document [*column 23, line 22 to column 24, line 14*]. Various types of attributes are associated with each line within a document by using a set of colors on the scroll bar [*column 27, lines 46-62*]. Conditional displays of an attribute are set up by specifying a foreground and background attribute type for the scroll bar [*column 28, lines 12-19, 36-44*]. This provides further information to a user

regarding which portions of a document are related to a plurality of attribute values [column 2, lines 18-27]. Since Graham '492 and Nielsen disclose a scroll bar for displaying relevant information about a document [Graham '492, figure 5], it would have been obvious to one of ordinary skill in the art at the time the invention was made to include user-defined foreground and background display criteria for displaying portions of the scroll bar containing certain attributes, as taught by Eick. This provides further information to a user regarding which portions of a document are related to a plurality of attribute values.

10-2. Regarding claim 25, Graham '492, Nielsen, and Eick teach the claim with respect to claim 24, wherein the background display criteria includes at least one of color, hue, intensity, and transparency because the default background for the scroll bar must have some sort of color. Additionally, markers indicating the attributes include lines of a different color or a color of the scroll bar [Eick, column 24, lines 1-14].

11. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (U.S. Patent No. 7,228,492 B1), in view of Nielsen (U.S. Patent No. 6,339,437 B1), And further in view of Graham et al (U.S. Patent No. 7,495,795 B2), herein after Graham '795.

Claims 27-29

11-1. Regarding claim 27, Graham '492 and Nielsen teach the claim as recited in claim 39. Graham '492 and Nielsen do not expressly teach wherein locating one or more desired locations in the file according to the location criteria comprises determining a reference count for each row in the file, the reference count indicating a number of the desired locations in the corresponding row. Graham '795 discloses displaying a scrollable thumbnail image of text representative of a current view of the text [Graham '795, column 11, lines 18-36; column 12, lines 22-43; figure 3]. The text information comprises a collection of lines with each line comprising one or more words [Graham '795, column 28, lines 12-30]. A data structure comprising a linked list of line objects is used to store the text information where each line object comprises a linked list of words contained in the line [Graham '795, column 28, lines 34-40]. This allows textual analysis to be performed on each line to calculate the frequency of individual words [Graham '795, column 37, lines 1-13]. Users may search the text for words [Graham '795, column 18, line 57 to column 19, line 12]. Ranges may be created and displayed based on the searched word [Graham '795, column 44, line 20 to column 45, line 5]. Since users may specify and edit ranges [Graham '795, column 42, lines 38-60], each range may correspond to a row of text. Ranges in a set of ranges may be ranked or sorted according to a user-configurable criteria such as relevance based on hits [Graham '795, column 58, lines 19-27]. Since Graham '492 discloses displaying relevancy of textual lines within a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store the relevancy and text of each row, as taught by Graham '795. This would provide more detailed information concerning each row

and thus, would allow users to more easily identify important sections of text within a document.

11-2. Regarding claim 28, Graham '492, Nielsen, and Graham '795 teach the claim with respect to claim 27, wherein displaying the scroll bar by applying the one or more display criteria to one or more locations of the scroll bar corresponding to the one or more desired locations in the file comprises applying the one or more display criteria to the one or more locations of the scroll bar in accordance with the reference count for corresponding rows in the file, by disclosing using the technique of Graham '795 [*Graham '795, column 58, lines 19-27*] as the technique for analyzing the document to determine locations of user-specified concept of interest of Graham '492 [*Graham '492, column 2, lines 10-19*]. A graphical representation of the analysis will be displayed [*Graham '492, column 2, lines 25-32*].

11-3. Regarding claim 29, Graham '492, Nielsen, and Graham '795 teach the claim with respect to claim 28, further comprising displaying one or more of the plurality of locations in the file by applying the one or more display criteria to the one or more of the plurality of locations in the file in accordance with the reference count for corresponding rows in the file, by disclosing that the annotation contour represents locations with the document [*Graham '492, column 4, lines 32-43*].

12. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (U.S. Patent No. 7,228,492 B1), in view of Nielsen (U.S. Patent No. 6,339,437 B1), in view of Graham et al (U.S. Patent No. 7,495,795 B2), and further in view of Mohan et al (U.S. Patent No. 6,970,881 B1).

Claims 30, 31

12-1. Regarding claim 30, Graham '492, Nielsen, and Graham '795 teach the claim with respect to claim 28. Graham '492, Nielsen, and Graham '795 do not expressly teach the claim further comprising dividing the reference count for each row in the file by a total number of reference counts in the file to obtain a row reference count, normalizing the row reference count for each row in the file, and wherein applying the one or more display criteria to the one or more locations of the scroll bar includes applying the one or more display criteria to the one or more locations of the scroll bar in accordance with the normalized row reference count for corresponding rows in the file. Mohan discloses categorizing and analyzing unstructured information such as documents [*column 1, lines 27-60; column 3, lines 10-25*] in order to provide an intelligent view of the unstructured information [*column 18, lines 5-12*]. Scores for individual key concepts that contributed to a search are averaged for each object returned. If the search was performed using a combination of key concepts and seed concepts, the number of hits for the seed concepts are divided by the total number of hits picked up for all seed concepts in the document to determine how much the seed concept actually contributed to the concept of the document. This is used to obtain a

relevancy score for the object as it pertains to a particular search [column 18, lines 33-45]. Scores are normalized as discussed in [column 16, line 30 to column 17, line 15]. Since Graham '492, Nielsen, and Graham '795 disclose classifying range of text based on the number of hits within it [Graham '795, column 58, lines 19-27] and displaying an annotation contour on a scroll bar [Graham '492, figure 5] based on a relevancy classification [Graham '492, column 2, lines 8-19], it would have been obvious to one of ordinary skill in the art at the time the invention was made, to use the method of determining a relevancy score, as taught by Mohan, on each row in the document. This would enable the user to view trends within each row of the document.

12-2. Regarding claim 31, Graham '492, Nielsen, Graham '795, and Mohan teach the claim with respect to claim 30, further comprising displaying one or more of the plurality of locations in the file by applying the one or more display criteria to the one or more of the plurality of locations in the file in accordance with the normalized row reference count for corresponding rows in the file, by disclosing using a technique for analyzing the document to determine locations of user-specified concept of interest [Graham '492, column 2, lines 10-19] for the graphical representation [Graham '492, column 2, lines 25-27]. Since the relevance is determined by the method as taught by Mohan, the attribute would be displayed based on the normalized row reference count for corresponding rows.

13. Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (U.S. Patent No. 7,228,492 B1), in view of Nielsen (U.S. Patent No. 6,339,437 B1), in view of Graham et al (U.S. Patent No. 7,495,795 B2), in view of Mohan et al (U.S. Patent No. 6,970,881 B1), and further in view of Kline ("Principles and Practice of Structural Equation Modeling", December 2002).

Claims 32-34

13-1. Regarding claim 32, Graham '492, Nielsen, Graham '795, and Mohan teach the claim as recited in claim 30. Graham '492, Nielsen, Graham '795, and Mohan do not expressly teach the claim further comprising applying a non-linear function to each normalized row reference count to generate a non-linear normalized row reference count for each row in the file wherein applying the one or more display criteria to the one or more locations of the scroll bar includes applying the one or more display criteria to the one or more locations of the scroll bar in accordance with the non-linear normalized row reference count for corresponding rows in the file. Kline discloses correcting a positive and negative skew in data by applying a non-linear function to the data [page 23, number 5; page 24, number 6]. Preventing a positive and negative skew in a data set of row scores would provide a more even distribution of row scores across the whole document and thus, allow the even distribution of colors to represent scores on the scroll bar. Since Graham '492, Nielsen, Graham '795, and Mohan disclose determining the relevance of rows within a document and displaying a graphical representation on a scroll bar based on a classification [Graham '492, column 2, lines

25-27; *figure 5*], it would have been obvious to one of ordinary skill in the art at the time the invention was made, to apply a non-linear function to each normalized row reference count as taught by Kline. This would provide a more even distribution of row scores across the whole document and thus, allow an even distribution to represent scores on the scroll bar.

13-2. Regarding claim 33, Graham '492, Nielsen, Graham '795, Mohan, and Kline teach the claim with respect to claim 32, further comprising displaying one or more of the plurality of locations in the file by applying the one or more display criteria to the one or more of the plurality of locations in the file in accordance with the non-linear normalized row reference count for corresponding rows in the file, by disclosing using a technique for analyzing the document to determine locations of user-specified concept of interest [*Graham '492, column 2, lines 10-19*] for the graphical representation [*Graham '492, column 2, lines 25-27*]. Since the relevance is determined as taught above, the attribute would be displayed based on the non-linear normalized row reference count for corresponding rows.

13-3. Regarding claim 34, Graham '492, Nielsen, Graham '795, Mohan, and Kline teach the claim with respect to claim 32, wherein the non-linear function is a square-root function [*Kline, page 23, number 5*].

14. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (U.S. Patent No. 7,228,492 B1) in view of Graham et al (U.S. Patent No. 7,495,795 B2).

Claim 45 (Method)

14-1. Regarding claim 45, Graham '492 teaches the claim comprising obtaining one or more location criteria to identify a plurality of desired rows in the file as a plurality of desired locations in the file, by disclosing accepting user input indicating a user's specified concepts of interest [*Graham '492, column 2, lines 8-10*].

Graham '492 teaches identifying one or more display criteria to be used to designate the plurality of desired locations in a file to display their relative importance with respect to each other, by disclosing displaying a graphical representation of the presence of one or more concepts of interest to the user [*Graham '492, column 2, lines 25-27*]. Annotations may also be added to the document text to denote relevance to user-selected concepts of interest [*Graham '492, column 7, lines 21-23*].

Graham '492 teaches locating the plurality of desired locations in the file according to the one or more location criteria, by disclosing analyzing an electronically stored document to identify locations of discussion of the user-specified concept of interest [*Graham '492, column 2, lines 10-13*].

Graham '492 teaches determining relative importance of each one of the plurality of desired locations in the file with respect to each other, by disclosing that techniques for determining locations of concepts of interest can be used such as keyword counting and Bayesian analysis [*Graham '492, column 2, lines 13-19*].

Graham '492 teaches displaying a vertical scroll bar, with at least a portion of content of the file and in proximity of an edge of the displayed portion of the content, wherein the vertical scroll bar is operable to scroll the file and indicate the relative size of the displayed portion of the content with respect to the size of the entire document, by disclosing scroll bar 704 [*Graham '492, column 8, lines 22-24; figure 7A*]. Additionally, [*Graham '492, figures 7A-D*] show a thumbnail image of the document on the left-hand side of user interface 701 with a window corresponding to the location within the document. Graham '492 teaches wherein the displaying of the vertical scroll bar displays the vertical scroll bar, based on the relative importance, by applying the one or more display criteria to each one of a plurality of corresponding locations of the vertical scroll bar corresponding to the plurality of desired locations in the file individually, wherein said displaying of the scroll bar also displays each one of the plurality of corresponding locations of the scroll bar to indicate the relative importance of content in each one of the plurality of desired locations in the file with respect to one another even though the content of the plurality of desired locations of the file are not displayed, by disclosing displaying an annotation contour 520 along an elongated thumbnail image 514 of the document [*Graham '492, column 7, lines 7-11; figure 5*]. The annotation contour 514 including a sliding window 524 may be considered a scroll bar since sliding window 524 corresponds to the current location of text displayed in section 502 and because the sliding window may be repositioned by the user [*Graham '492, column 6, line 65 to column 7, line 15*]. Although [*Graham '492, figure 5*] depicts the annotation contour on a horizontal scroll bar, [*Graham '492, column 9, line 60 to column 10, line 3*]

clearly states that the visual indicator (i.e. the annotation contour) may be displayed on either axis. This, taken in conjunction with [Graham '492, figures 7A-D] which shows a thumbnail representation of the document displayed vertically, suggests that one could easily depict the annotation contour along the vertically displayed thumbnail image of [Graham '492, figures 7A-D]. In fact, one would only need to switch the x and y coordinates of the annotation contour displayed in [Graham '492, figure 5] in order to do so.

Graham '492 teaches a plurality of horizontal segments, each of the horizontal segments indicating relative importance of contents in the corresponding locations of the file, by disclosing that the annotation contour may comprise a line graph, bar chart, scatter plots and the like [Graham '492, column 4, lines 24-32]. If the annotation contour of [Graham '492, figure 5] were displayed vertically using a bar chart, horizontal segments would indicate the relative importance of the contents.

Graham '492 teaches displaying at least a portion of the file by applying at least one of the display criteria when the scroll bar is being displayed, by disclosing that annotations are added to the document text to denote relevance of user-selected concepts of interest [Graham '492, column 7, lines 21-23].

Graham '492 does not expressly teach wherein the plurality of horizontal segments are displayed at least partially based on one or more granule objects, wherein each one of the one or more granule objects is representative of one of the desired rows of the displayed content, and wherein each granulate object stores at least: (a) a reference count indicative of the relative importance of its respective row and (b) text of

its respective row. Graham '795 discloses displaying a scrollable thumbnail image of text representative of a current view of the text [*Graham '795, column 11, lines 18-36; column 12, lines 22-43; figure 3*]. The text information comprises a collection of lines with each line comprising one or more words [*Graham '795, column 28, lines 12-30*]. A data structure comprising a linked list of line objects is used to store the text information where each line object comprises a linked list of words contained in the line [*Graham '795, column 28, lines 34-40*]. This allows textual analysis to be performed on each line to calculate the frequency of individual words [*Graham '795, column 37, lines 1-13*]. Users may search the text for words [*Graham '795, column 18, line 57 to column 19, line 12*]. Ranges may be created and displayed based on the searched word [*Graham '795, column 44, line 20 to column 45, line 5*]. Since users may specify and edit ranges [*Graham '795, column 42, lines 38-60*], each range may correspond to a row of text. Ranges in a set of ranges may be ranked or sorted according to a user-configurable criteria such as relevance based on hits [*Graham '795, column 58, lines 19-27*]. Since Graham '492 discloses displaying relevancy of textual lines within a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store the relevancy and text of each row, as taught by Graham '795. This would provide more detailed information concerning each row and thus, would allow users to more easily identify important sections of text within a document.

Response to Arguments

15. The Examiner acknowledges the Applicant's amendments to claims 4, 5, 8, 11-13, 15, 23, and 38, the cancellation of claims 7, 9, 10, 16-22, and 35-37, and the addition of claims 39-48. Regarding independent claim 39, the Applicant alleges that Graham '492 (U.S. Patent No. 7,228,492 B1), as described in the previous Office action, does not explicitly teach, "changing the appearance of the scroll bar as the scroll bar is moved relative to the file, wherein the change in appearance of the scroll bar is based upon the determined relative importance of the desired locations in the file corresponding to a current position of the scroll bar." Examiner notes that the claim has been rejected under 35 U.S.C. 112, first paragraph, for failing to comply with the written description requirement. The claim has been rejected under 35 U.S.C § 103 as being unpatentable over Graham '492 in view of Nielsen (U.S. Patent No. 6,339,437 B1).

Applicant alleges that Graham '492 teaches away from a scroll bar that changes its appearance based on relative importance of content. However, one of ordinary skill in the art at the time the invention was made would be able to use the method of determining relevance of user-selected concepts of interest, as taught by Graham '492, with the method of changing the appearance of the scroll thumb or scroll bar using a graphical representation based on the relevance at a desired location of the file corresponding to a current position of the scroll bar, as taught by Nielsen [*Nielsen, column 6, lines 49-55*]. This would allow the user to more easily determine where in the file relevant content is located [*Nielsen, column 1, lines 25-30*].

Independent claims 40 and 44 have been similarly amended and thus, claims 40 and 44 are rejected for the same reasons.

Regarding independent claim 45, Applicant alleges that Graham '492 does not teach a vertical scroll bar in proximity of an edge of the displayed portion of the content. Contrary to Applicant's arguments, although [Graham '492, figure 5] depicts the annotation contour on a horizontal scroll bar, [Graham '492, column 9, line 60 to column 10, line 3] clearly states that the visual indicator (i.e. the annotation contour) may be displayed on either axis. This, taken in conjunction with [Graham '492, figures 7A-D] which shows a thumbnail representation of the document displayed vertically, suggests that one could easily depict the annotation contour along the vertically displayed thumbnail image of [Graham '492, figures 7A-D]. In fact, one would only need to switch the x and y coordinates of the annotation contour displayed in [Graham '492, figure 5] in order to do so.

Applicant alleges that Graham '492 teaches away from the claimed vertical scroll bar in proximity of an edge of the displayed portion of the content. Contrary to Applicant's arguments, Graham '492 discloses [Graham '492, figure 7A] which displays both a vertical thumbnail representation of the document and a conventional scroll bar 704. Therefore, Graham '492 does not teach away from displaying another navigational bar along with a display of the conventional scroll bar.

Applicant alleges that Graham '492 and Graham '795 (U.S. Patent No. 7,495,795 B2) do not teach or suggest, "obtaining a plurality of desired rows in the file as a plurality of desired locations in the file; and displaying a plurality of horizontal segments of the scroll bar at least partially based on one or more granule objects, wherein each one of the one or more granule objects is representative of one of the desired rows."

Contrary to Applicant's arguments, Graham '795 discloses displaying a scrollable thumbnail image of text representative of a current view of the text [*Graham '795, column 11, lines 18-36; column 12, lines 22-43; figure 3*]. The text information comprises a collection of lines with each line comprising one or more words [*Graham '795, column 28, lines 12-30*]. A data structure comprising a linked list of line objects is used to store the text information where each line object comprises a linked list of words contained in the line [*Graham '795, column 28, lines 34-40*]. This allows textual analysis to be performed on each line to calculate the frequency of individual words [*Graham '795, column 37, lines 1-13*]. Users may search the text for words [*Graham '795, column 18, line 57 to column 19, line 12*]. Ranges may be created and displayed based on the searched word [*Graham '795, column 44, line 20 to column 45, line 5*]. Since users may specify and edit ranges [*Graham '795, column 42, lines 38-60*], each range may correspond to a row of text. Ranges in a set of ranges may be ranked or sorted according to a user-configurable criteria such as relevance based on hits [*Graham '795, column 58, lines 19-27*]. Since Graham '492 discloses displaying relevancy of textual lines within a document, it would have been obvious to one of ordinary skill in the art at the time the invention was made to store the relevancy and text of each row, as taught by Graham '795. This would provide more detailed information concerning each row and thus, would allow users to more easily identify important sections of text within a document.

Applicant alleges that Graham '492 and Graham '795 do not teach or suggest, "displaying at least a portion of the file by applying the display criteria when the scroll

bar is being displayed." Contrary to Applicant's arguments, Graham '492 discloses that annotations are added to the document text to denote relevance of user-selected concepts of interest [*Graham '492, column 7, lines 21-23*].

Applicant states that dependent claims 4-6, 8, 11-15, 23-34, 38, 41-43, and 46-48 recite all the limitations of the independent claims, and thus, are allowable in view of the remarks set forth regarding independent claims 39, 40, and 44. However, as discussed above, Graham '492, in view of Nielsen, are considered to teach claims 39, 40, and 44, and consequently, claims 4-6, 8, 11-15, 23-34, 38, 41-43, and 46-48 are rejected.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALVIN H. TAN whose telephone number is (571)272-8595. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kieu Vu can be reached on 571-272-4057. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alvin H Tan/
Examiner, Art Unit 2173